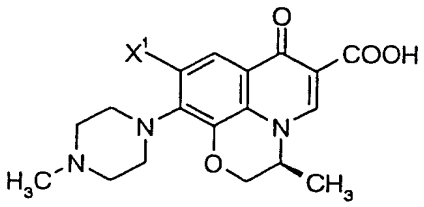
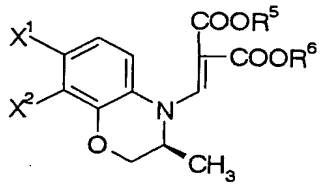
## CLAIMS

1. A process for producing a compound represented by the following formula:

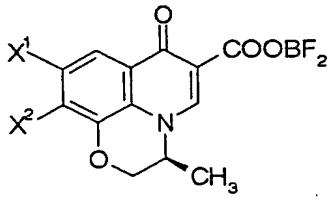


which comprises comprising obtaining a compound represented by formula (VI-a) by any of the following Processes A to J:



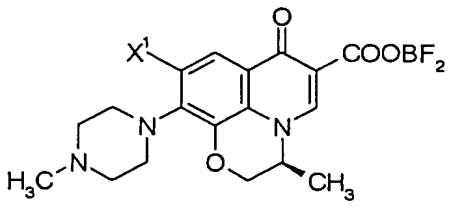
(VI-a)

treating this compound with a boron trifluoride compound to thereby convert it into a boron chelate compound represented by the following formula:



reacting this compound with 4-methylpiperazine to give a

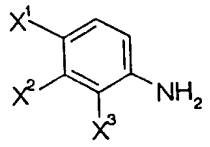
compound represented by the following formula:



and then cleaving and eliminating the boron chelate of this compound:

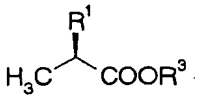
Process A:

a process which comprises reacting a compound represented by formula (I):



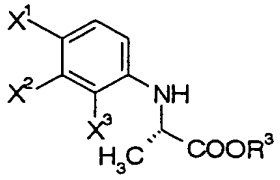
(I)

with a compound represented by formula (II-1-a) in the presence of a base:



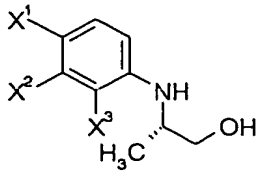
(II-1-a)

to give a compound represented by the formula (III-1-a):



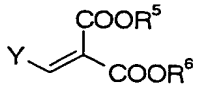
(III-1-a)

reducing this compound into a compound represented by formula (IV-a):

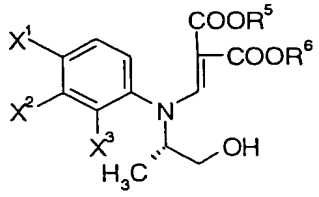


(IV-a)

reacting this compound with a compound represented by the following formula:



to give a compound represented by the formula (V-a):

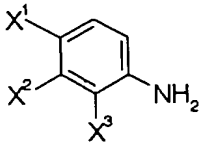


(V-a)

and then treating this compound in the presence of a base;

Process B:

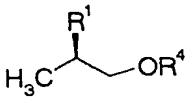
a process which comprises reacting a compound represented by formula (I):



(I)

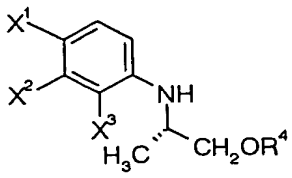
with a compound represented by formula (II-2-a) in the presence

of a base:



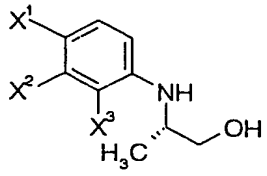
(II-2-a)

to give a compound represented by formula (III-2-a):



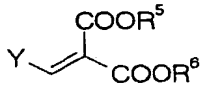
(III-2-a)

eliminating the hydroxyl-protective group of this compound to give a compound represented by formula (IV-a):

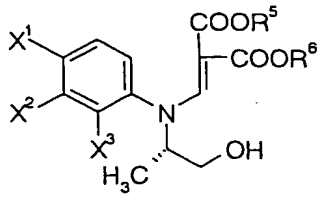


(IV-a)

reacting this compound with a compound represented by the following formula:



to give a compound represented by the formula (V-a):

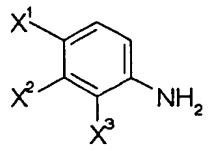


(V-a)

and then treating this compound in the presence of a base;

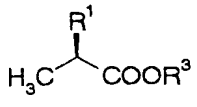
Process C:

a process which comprises reacting a compound represented by formula (I):



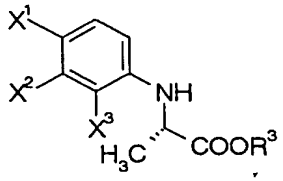
(I)

with a compound represented by formula (II-1-a) in the presence of a base:



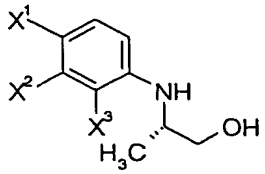
(II-1-a)

to give a compound represented by formula (III-1-a):



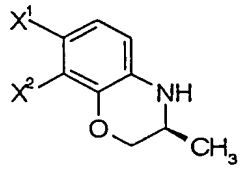
(III-1-a)

reducing this compound into a compound represented by formula (IV-a):



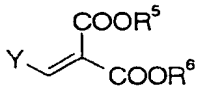
(IV-a)

treating this compound in the presence of a base to give a compound represented by the formula (VII-a):



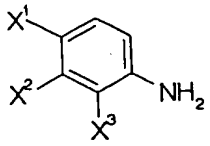
(VII-a)

and reacting this compound with a compound represented by the following formula;



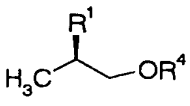
Process D:

a process which comprises reacting a compound represented by formula (I):



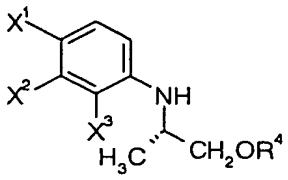
(I)

with a compound represented by formula (II-2-a) in the presence of a base:



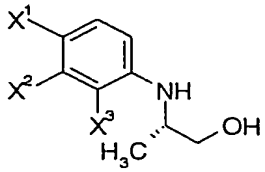
(II-2-a)

to give a compound represented by formula (III-2-a):



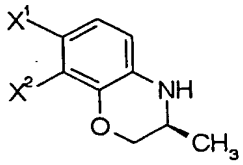
(III-2-a)

eliminating the hydroxyl-protective group of this compound to give a compound represented by formula (IV-a):



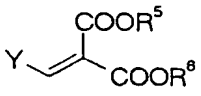
(IV-a)

treating this compound in the presence of a base to give a compound represented by formula (VII-a):



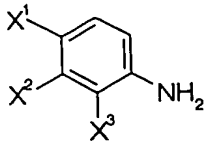
(VII-a)

and then reacting this compound with a compound represented by the following formula:



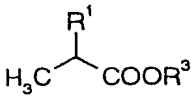
Process E:

a process which comprises reacting a compound represented by formula (I):



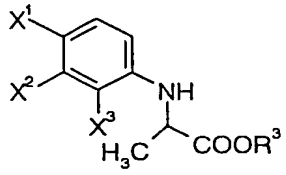
(I)

with a compound represented by formula (II-1) in the presence of a base:



(II-1)

to give a compound represented by formula (III-1):



(III-1)

and then subjecting this compound to the following Method 1 or 2;

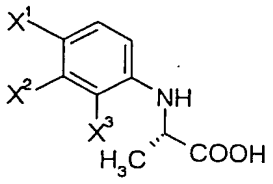
Method 1:

in case of the compound represented by the formula (III-1) where $R^3$ is not a hydrogen atom, a method which comprises treating this compound with an enzyme capable of asymmetrically hydrolyzing an ester or a liquid culture medium of a microorganism, cells of this microorganism or processed cells of this microorganism and, after the completion of this treatment, isolating the product from the treated liquid mixture;

Method 2:

in case of the compound represented by the formula (III-1) where $R^3$ is a hydrogen atom, a method which comprises optically resolving this compound by reacting with an optically active organic base;

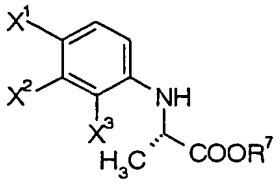
to obtain a carboxylic acid compound represented by the following formula:



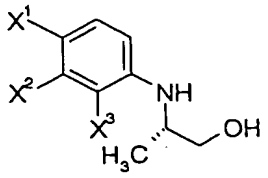
esterifying this compound in the presence of an alcohol represented by the following formula:

$R^7$-OH

to give an ester compound represented by the following formula:



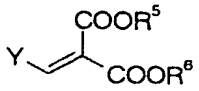
reducing the compound into a compound represented by formula (IV-a):



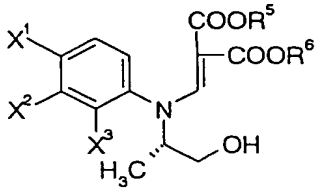
(IV-a)

reacting this compound with a compound represented by the

following formula:



to give a compound represented by formula (V-a):

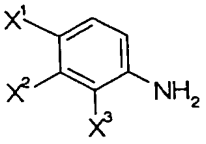


(V-a)

and then treating this compound in the presence of a base;

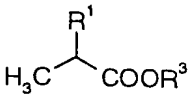
Process F:

a process which comprises reacting a compound represented by formula (I):



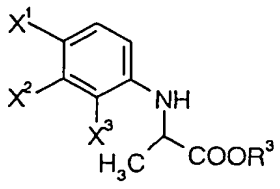
(I)

with a compound represented by formula (II-1) in the presence of a base:



(II-1)

to give a compound represented by formula (III-1):



(III-1)

and then subjecting this compound to the following Method 1 or 2;

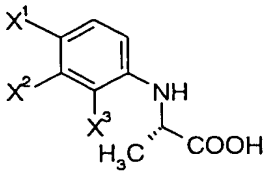
Method 1:

in case of the compound represented by the formula (III-1) where $R^3$ is not a hydrogen atom, a method which comprises treating this compound with an enzyme capable of asymmetrically hydrolyzing an ester or a liquid culture medium of a microorganism, cells of this microorganism or processed cells of this microorganism and, after the completion of this treatment, isolating the product from the treated liquid mixture;

Method 2:

in case of the compound represented by the formula (III-1) where $R^3$ is a hydrogen atom, a method which comprises optically resolving this compound by reacting with an optically active organic base;

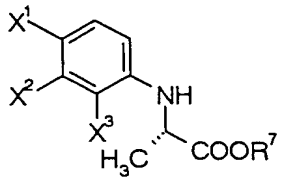
to obtain a carboxylic acid compound represented by the following formula:



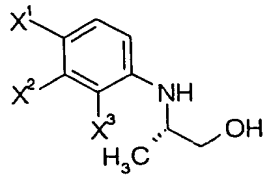
esterifying this compound in the presence of an alcohol represented by the following formula:

$R^7$-OH

to give an ester compound represented by the following formula:

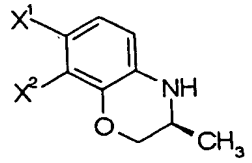


reducing the compound into a compound represented by formula (IV-a):



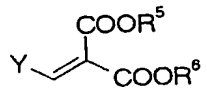
(IV-a)

treating this compound in the presence of a base to give a compound represented by formula (VII-a):



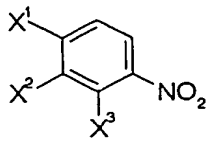
(VII-a)

and then reacting this compound with a compound represented by the following formula;

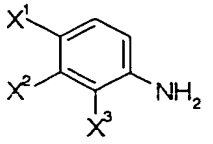


Process G:

a process which comprises reacting a compound represented by the following formula:



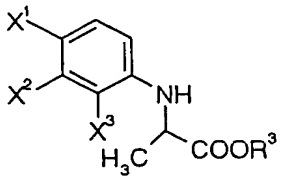
or by the following formula:



with a compound represented by the following formula in the presence of a metal catalyst under a hydrogen gas atmosphere, optionally in the presence of a dehydrating agent or an acid:

$CH_3COCOOR^3$

to give a compound represented by formula (III-1):



(III-1)

and then subjecting this compound to the following Method 1 or 2;

Method 1:

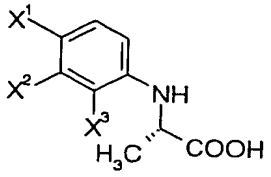
in case of the compound represented by the formula (III-1)

where $R^3$ is not a hydrogen atom, a method which comprises treating this compound with an enzyme capable of asymmetrically hydrolyzing an ester or a liquid culture medium of a microorganism, cells of this microorganism or processed cells of this microorganism and, after the completion of this treatment, isolating the product from the treated liquid mixture;

Method 2:

in case of the compound represented by the formula (III-1) where $R^3$ is a hydrogen atom, a method which comprises optically resolving this compound by reacting with an optically active organic base;

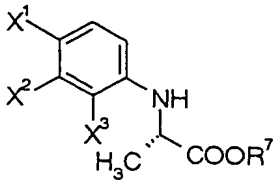
to obtain a carboxylic acid compound represented by the following formula:



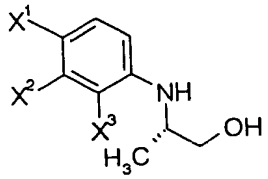

esterifying this compound in the presence of an alcohol represented by the following formula:

$R^7$-OH

to give an ester compound represented by the following formula:

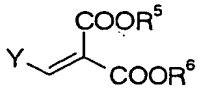


reducing the compound into a compound represented by formula (IV-a):

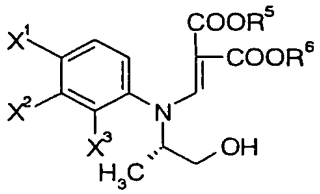


(IV-a)

reacting this compound with a compound represented by the following formula:



to give a compound represented by the formula (V-a):

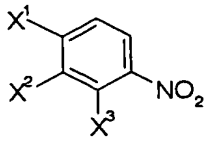


(V-a)

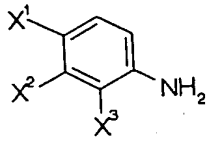
and then treating this compound in the presence of a base;

Process H:

a process which comprises reacting a compound represented by the following formula:



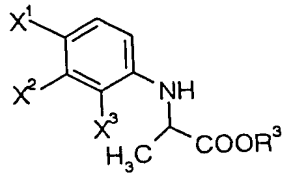
or by the following formula:



with a compound represented by the following formula in the presence of a metal catalyst under a hydrogen gas atmosphere, optionally in the presence of a dehydrating agent or an acid:

$CH_3COCOOR^3$

to give a compound represented by formula (III-1):



(III-1)

and then subjecting this compound to the following Method 1 or 2;

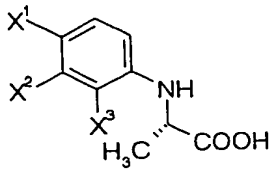
Method 1:

in case of the compound represented by the formula (III-1) where $R^3$ is not a hydrogen atom, a method which comprises treating this compound with an enzyme capable of asymmetrically hydrolyzing an ester or a liquid culture medium of a microorganism, cells of this microorganism or processed cells of this microorganism and, after the completion of this treatment, isolating the product from the treated liquid mixture;

Method 2:

in case of the compound represented by the formula (III-1) where $R^3$ is a hydrogen atom, a method which comprises optically resolving this compound by reacting with an optically active organic base;

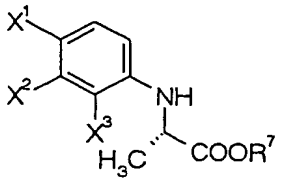
to obtain a carboxylic acid compound represented by the following formula:



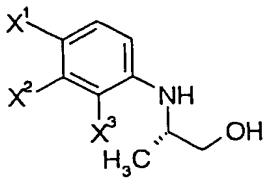
esterifying this compound in the presence of an alcohol represented by the following formula:

$R^7$-OH

to give an ester compound represented by the following formula:



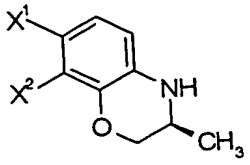
reducing the compound into a compound represented by formula (IV-a):



(IV-a)

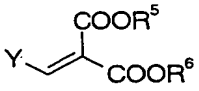
treating this compound in the presence of a base to give a compound

represented by formula (VII-a):



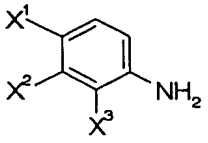
(VII-a)

and then reacting this compound with a compound represented by the following formula;



Process I:

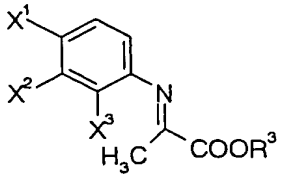
a process which comprises reacting a compound represented by the following formula:



with a compound represented by the following formula:

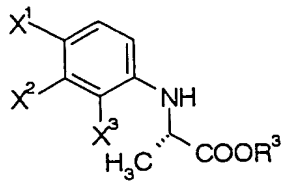
$CH_3COCOOR^3$

to give a compound represented by the following formula:



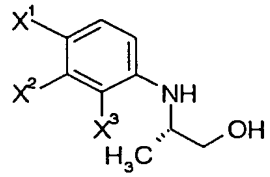
asymmetrically reducing this compound into a compound

represented by formula (III-1-a):



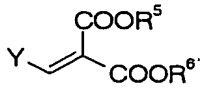
(III-1-a)

reducing this compound into a compound represented by formula (IV-a):

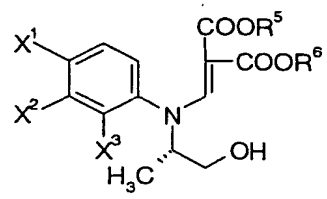


(IV-a)

reacting this compound with a compound represented by the following formula:



to give a compound represented by the formula (V-a):



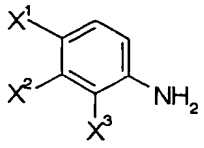
(V-a)

and then treating this compound in the presence of a base; and

Process J:

a process which comprises reacting a compound represented

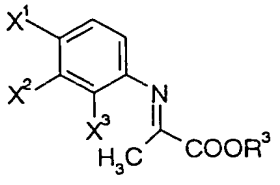
by the following formula:



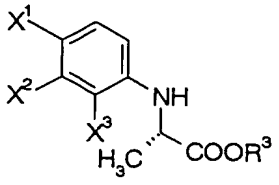
with a compound represented by the following formula:

$CH_3COCOOR^3$

to give a compound represented by the following formula:

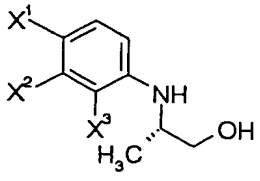


asymmetrically reducing this compound into a compound represented by formula (III-1-a):



(III-1-a)

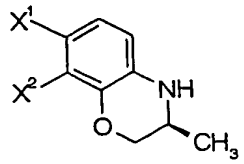
reducing this compound into a compound represented by formula (IV-a):



(IV-a)

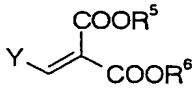
treating this compound in the presence of a base to give a compound

represented by formula (VII-a):



(VII-a)

and then reacting this compound with a compound represented by the following formula:



[in each of the above formulae, $X^1$, $X^2$ and $X^3$, each independently represents a halogen atom; $R^1$ represents a leaving group; $R^3$ represents a hydrogen atom or a carboxyl-protective group; $R^4$ represents a hydroxyl-protective group; $R^5$ and $R^6$, each independently represents an alkyl group having 1 to 6 carbon atoms; $R^7$ represents a carboxyl-protective group; and Y represents an alkoxy group having 1 to 6 carbon atoms, a halogen atom or a dialkylamino group (wherein the alkyl groups may be the same or different and each represents an alkyl group having 1 to 6 carbon atoms)].

2. The process as claimed in claim 1 wherein the process for producing the compound represented by the formula (VI-a) is Process A.

3. The process as claimed in claim 1 wherein the process for producing the compound represented by the formula (VI-a)

is Process B.

4. The process as claimed in claim 1 wherein the process for producing the compound represented by the formula (VI-a) is Process C.

5. The process as claimed in claim 1 wherein the process for producing the compound represented by the formula (VI-a) is Process D.

6. The process as claimed in claim 1 wherein the process for producing the compound represented by the formula (VI-a) is Process E.

7. The process as claimed in claim 1 wherein the process for producing the compound represented by the formula (VI-a) is Process F.

8. The process as claimed in claim 1 wherein the process for producing the compound represented by the formula (VI-a) is Process G.

9. The process as claimed in claim 1 wherein the process for producing the compound represented by the formula (VI-a) is Process H.

10. The process as claimed in claim 1 wherein the process for producing the compound represented by the formula (VI-a) is Process I.

11. The process as claimed in claim 1 wherein the process for producing the compound represented by the formula (VI-a) is Process J.

12. A process as claimed in any of claims 1 to 11 wherein $X^1$ and $X^2$ are both fluorine atoms.

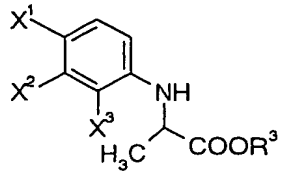
13. The process as claimed in claim 12 wherein the boron trifluoride compound is a boron trifluoride compound composed of boron trifluoride and an ether compound.

14. The process as claimed in claim 13 wherein the boron trifluoride compound is boron trifluoride diethyl ether complex or boron trifluoride tetrahydrofruan complex.

15. The process as claimed in claim 14 wherein the reaction of 4-methylpiperazine is a reaction in the presence of a trialkylamine.

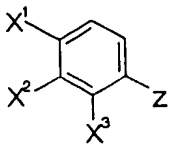
16. The process as claimed in claim 15 wherein the trialkylamine is triethylamine or tributylamine.

17. A process for producing a compound represented by formula (III-1):




(III-1)

which comprises treating a compound represented by formula (I-0):




(I-0)

and a compound represented by the following formula

$CH_3COCOOR^3$

in the presence of a metal catalyst under a hydrogen gas atmosphere, optionally in the presence of an acid acceptor or an acid;

(in each of the above formulae, $X^1$, $X^2$ and $X^3$, each independently represents a halogen atom; $R^3$ represents a hydrogen atom or a carboxyl-protective group; and Z represents a nitro group or an amino group).

18. The process as claimed in claim 17 wherein $R^3$ is a hydrogen atom.

19. The process as claimed in claim 17 wherein $R^3$ is a methyl group.

20. The process as claimed in claim 17 wherein $R^3$ is an ethyl group.

21. The process as claimed in any of claims 17 to 20 wherein Z is an amino group.

22. The process as claimed in any of claims 17 to 20 wherein Z is a nitro group.

23. The process as claimed in claim 17 wherein Z is an amino group and $R^3$ is a hydrogen atom.

24. The process as claimed in claim 17 wherein Z is an amino group and $R^3$ is a methyl group.

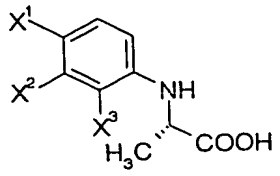
25. The process as claimed in claim 17 wherein Z is an amino group and $R^3$ is an ethyl group.

26. The process as claimed in claim 17 wherein Z is a nitro group and $R^3$ is a hydrogen atom.

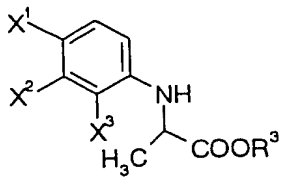
27. The process as claimed in claim 17 wherein Z is a nitro group and $R^3$ is a methyl group.

28. The process as claimed in claim 17 wherein Z is a nitro group and $R^3$ is an ethyl group.

29. A process for producing a carboxylic acid compound represented by the following formula:



which comprises treating an ester compound among compounds represented by formula (III-1):

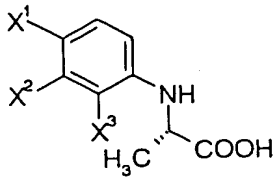


(III-1)

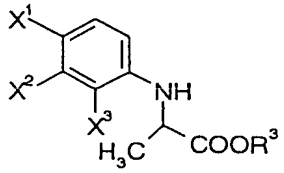
with an enzyme capable of asymmetrically hydrolyzing an ester or a liquid culture medium of a microorganism, cells of this microorganism or processed cells of this microorganism and then isolating and collecting from the treated liquid;

(wherein $X^1$, $X^2$ and $X^3$, each independently represents a halogen atom; and $R^3$ represents a hydrogen atom or a carboxyl-protective group).

30. A process for producing a carboxylic acid compound represented by the following formula:

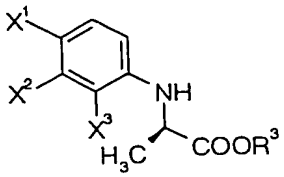


which comprises treating an ester compound among compounds represented by the formula (III-1):



(III-1)

in the presence of an enzyme capable of asymmetrically hydrolyzing an ester or a liquid culture medium of a microorganism, cells of this microorganism or processed cells of this microorganism and then separating and removing a compound represented by formula (III-1-b) from the treated liquid:

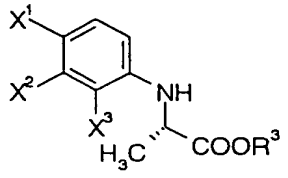


(III-1-b)

(wherein $X^1$, $X^2$ and $X^3$, each independently represents a halogen atom; and $R^3$ represents a hydrogen atom or a carboxyl-protective group).

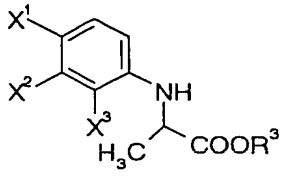
31. A process for producing an ester compound among compounds

represented by formula (III-1-a):



(III-1-a)

which comprises treating an ester compound among compounds represented by formula (III-1):

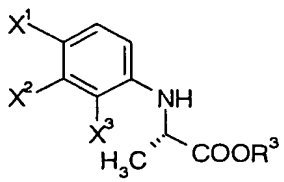


(III-1)

with an enzyme capable of asymmetrically hydrolyzing an ester or a liquid culture medium of a microorganism, cells of this microorganism or processed cells of this microorganism and then isolating and collecting from the treated liquid;

(wherein $X^1$, $X^2$ and $X^3$, each independently represents a halogen atom; and $R^3$ represents a hydrogen atom or a carboxyl-protective group).

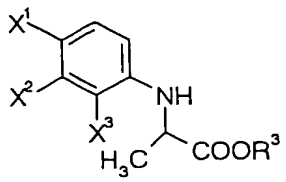
32. A process for producing an ester compound among compounds represented by formula (III-1-a):



(III-1-a)

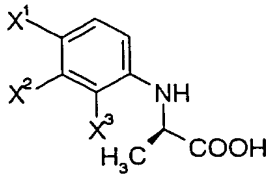
which comprises treating an ester compound among compounds

represented by formula (III-1):



(III-1)

in the presence of an enzyme capable of asymmetrically hydrolyzing an ester or a liquid culture medium of a microorganism, cells of this microorganism or processed cells of this microorganism and then separating and removing a carboxylic acid compound represented by the following formula from the treated liquid:



(wherein $X^1$, $X^2$ and $X^3$, each independently represents a halogen atom; and $R^3$ represents a hydrogen atom or a carboxyl-protective group).

33. The process as claimed in any of claims 29 to 32 wherein $R^3$ is a methyl group.

34. The process as claimed in any of claims 29 to 32 wherein $R^3$ is an ethyl group.

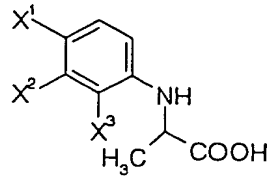
35. The process as claimed in any of claims 29 to 32 wherein the enzyme used in the treatment is an esterase, a protease or a chymotrypsin.

36. The process as claimed in any of claims 29 to 32 wherein the microorganism is a microorganism selected from bacteria belonging to the genera *Bacillus*, *Micrococcus* and *Actinomyces*.

37. The process as claimed in any of claims 29 to 32 wherein the microorganism is a microorganism selected from fungi belonging to the genera *Aspergillus*, *Rhizopus* and *Nannizia*.

38. The process as claimed in any of claims 29 to 32 wherein the microorganism is a microorganism selected from yeasts belonging to the genera *Candida*, *Saccharomyces* and *Zygoascus*.

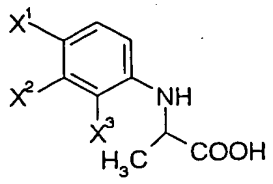
39. A process for producing a 2-(2,3,4-trihalogenoanilino)propionic acid comprised of a single optical isomer, which comprises optically resolving a compound represented by the following formula:




(wherein $X^1$, $X^2$ and $X^3$, each independently represents a halogen atom);

by using an optically active organic base.

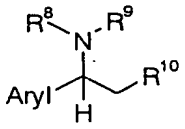
40. A process for producing a 2-(2,3,4-trihalogenoanilino)propionic acid comprised of a single optical isomer, which comprises treating a compound represented by the following formula:



(wherein $X^1$, $X^2$ and $X^3$, each independently represents a halogen atom);

with an optically active organic base to give a diastereomeric salt of one of the optical isomers of the 2-(2,3,4-trihalogenoanilino)propionic acid and the optically active organic base and then treating the diastereomeric salt with an acid.

41. The process as claimed in claim 39 or 40 wherein the optically active organic base is a compound represented by the following formula:



(wherein Aryl represents an aryl group optionally having a halogen atom, a nitro group, a cyano group, a carbamoyl group, an alkyl group having 1 to 6 carbon atoms or an alkoxy group having 1 to 6 carbon atoms; and

$R^8$, $R^9$ and $R^{10}$, each independently represents:

(1) a phenyl group optionally having a halogen atom, an alkyl group having 1 to 6 carbon atoms, a halogenoalkyl group having 1 to 6 carbon atoms, an alkoxy group having 1 to 6 carbon

atoms, a nitro group, a carbamoyl group or a cyano group;

(2) a benzyl group optionally having a halogen atom, an alkyl group having 1 to 6 carbon atoms, a halogenoalkyl group having 1 to 6 carbon atoms, an alkoxy group having 1 to 6 carbon atoms, a nitro group, a carbamoyl group or a cyano group;

(3) an alkyl group having 1 to 6 carbon atoms; or

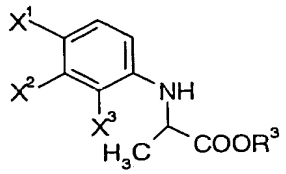
(4) a hydrogen atom).

42. The process as claimed in claim 39 or 40 wherein the optically active organic base is 1-phenylethylamine.

43. The process as claimed in claim 39 or 40 wherein the optically active organic base is 1-(p-tolyl)ethylamine.

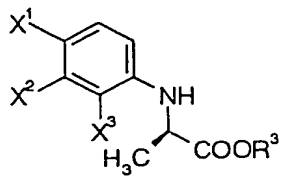
44. The process as claimed in claim 39 or 40 wherein the optically active organic base is 1-phenyl-2-(tolyl)ethylamine.

45. A process for producing an ester compound in the form of a racemate among compounds represented by formula (III-1):



(III-1)

which comprises treating an ester compound among compounds represented by formula (III-1-b) in the presence of a base:



(III-1-b)

(wherein $X^1$, $X^2$ and $X^3$, each independently represents a halogen atom; and $R^3$ represents a hydrogen atom or a carboxyl-protective group).

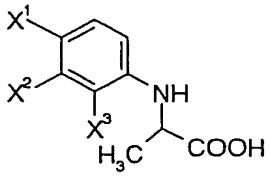
46. The process as claimed in claim 45 wherein the base is a nitrogen-containing heterocyclic compound.

47. The process as claimed in claim 45 wherein the base is 1,8-diazabicyclo[5.4.0]undec-7-ene (DBU) or 1,8-diazabicyclo[4.3.0]undec-5-ene (DBN).

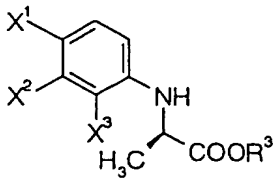
48. The process as claimed in claim 45 wherein the base is an alkali metal or alkaline earth metal carbonate.

49. The process as claimed in claim 45 wherein the base is potassium carbonate.

50. A process for producing a carboxylic acid in the form of a racemate represented by the following formula:




which comprises racemizing treating an ester compound among compounds represented by formula (III-1-b) by treating in the presence of a base followed by hydrolysis:




(III-1-b)

(wherein $X^1$, $X^2$ and $X^3$, each independently represents a halogen atom; and $R^3$ represents a hydrogen atom or a carboxyl-protective group).

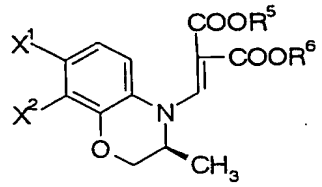
51. The process as claimed in claim 50 wherein the base is a metal alkoxide.

52. The process as claimed in claim 50 wherein the base is potassium tertiary-butoxide.

53. The process as claimed in claim 50 wherein the base is an alkali metal or alkaline earth metal carbonate.

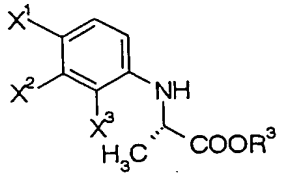
54. The process as claimed in claim 50 wherein the base is potassium carbonate.

55. A process for producing a compound represented by the formula (VI-a):



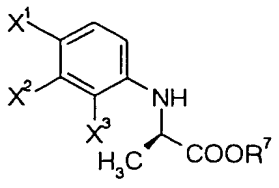

(VI-a)

which comprises reacting a compound represented by formula (III-1-a):

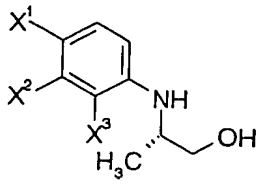



(III-1-a)

or a compound represented by the following formula

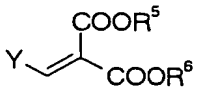


with a metal borohydride compound in an aprotic solvent in the presence of an alcohol to give a compound represented by formula (IV-a):

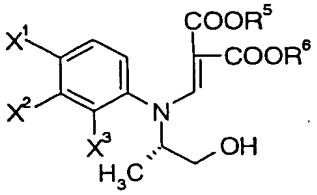


(IV-a)

reacting this compound with a compound represented by the following formula under basic conditions:



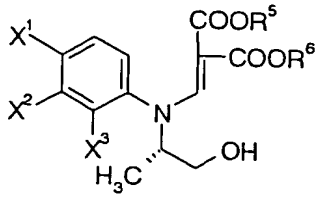
to give a compound represented by formula (V-a):



(V-a)

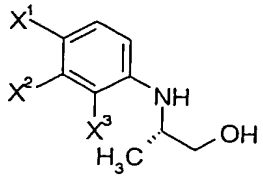
and then treating this compound under basic conditions.

56. A process for producing a compound represented by formula (V-a):



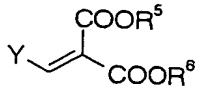
(V-a)

which comprises reacting a compound represented by formula (IV-a):

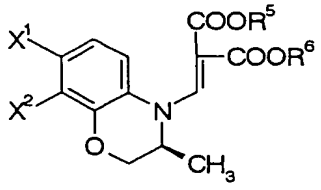


(IV-a)

with a compound represented by the following formula under basic conditions:

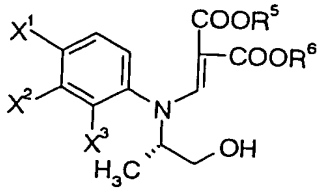


57. A process for producing a compound represented by formula (VI-a):



(VI-a)

which comprises reacting a compound represented by formula (V-a) under basic conditions:




(V-a)

(wherein $X^1$, $X^2$ and $X^3$, each independently represents a halogen atom; and $R^5$ and $R^6$, each independently represents an alkyl group having from 1 to 6 carbon atoms).

58. The process as claimed in claim 57 wherein the basic conditions are basic conditions in which a base exists together with a phase transfer catalyst.

59. The process as claimed in claim 57 or 58 wherein the base is an alkali metal hydroxide or an alkaline earth metal hydroxide.

60. The process as claimed in claim 57 or 58 wherein the base is potassium hydroxide.

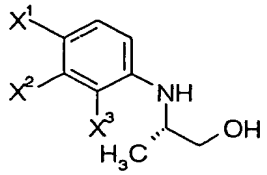
61. The process as claimed in any of claims 57 to 60 wherein the phase transfer catalyst is a quaternary ammonium salt or a crown ether.

62. The process as claimed in any of claims 57 to 60 wherein the phase transfer catalyst is a quaternary ammonium salt.

63. The process as claimed in any of claim 62 wherein the quaternary ammonium salt is tetra(normal-hexyl)ammonium chloride, trimethylbenzylammonium chloride, triethylbenzylammonium chloride, trimethylphenylammonium

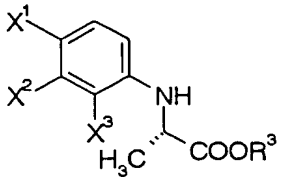
chloride or tetrabutylammonium hydrogen sulfate.

64. A process for producing a compound represented by formula (IV-a):



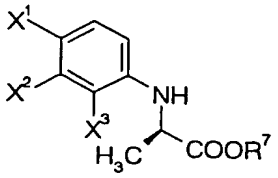
(IV-a)

which comprises treating a compound represented by formula (III-1-a):



(III-1-a)

or represented by the following formula:



in an aprotic solvent with a metal borohydride compound and an alcohol;

(wherein $X^1$, $X^2$ and $X^3$, each independently represents a halogen atom; $R^3$ represents a hydrogen atom or a carboxyl-protective group; and $R^7$ represents a carboxyl-protective group).

65. The process as claimed in claim 64 wherein the compound represented by the formula (III-1-a) is an ester compound.

66. The process as claimed in claim 65 wherein $R^3$ and $R^7$ are each an alkyl group having from 1 to 6 carbon atoms.

67. The process as claimed in any of claims 64 to 66 wherein $R^3$ and $R^7$ are each a methyl group.

68. The process as claimed in any of claims 64 to 66 wherein $R^3$ and $R^7$ are each an ethyl group.

69. The process as claimed in any of claims 64 to 68 wherein the aprotic solvent is a solvent selected from the compounds of the group consisting of aromatic hydrocarbons, alkanes, cycloalkanes, ethers, halogenated hydrocarbons and acetic acid esters.

70. The process as claimed in any of claims 64 to 68 wherein the aprotic solvent is an aromatic hydrocarbon.

71. The process as claimed in any of claims 64 to 68 wherein the aprotic solvent is an alkane.

72. The process as claimed in any of claims 64 to 68 wherein the aprotic solvent is a cycloalkane.

73. The process as claimed in any of claims 64 to 68 wherein the aprotic solvent is an ether.

74. The process as claimed in any of claims 64 to 68 wherein the aprotic solvent is a halogenated hydrocarbon.

75. The process as claimed in any of claims 64 to 68 wherein the aprotic solvent is an acetic acid ester.

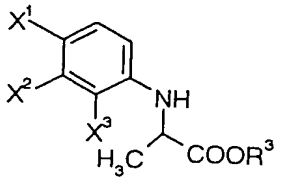
76. The process as claimed in any of claims 64 to 75 wherein the alcohol is a primary alcohol.

77. The process as claimed in any of claims 64 to 75 wherein the primary alcohol is methanol.

78. The process as claimed in any of claims 64 to 77 wherein the methal borohydride compound is sodium borohydride.

79. The process as claimed in any of claims 64 to 69 wherein $X^1$, $X^2$ and $X^3$ are each a fluorine atom.

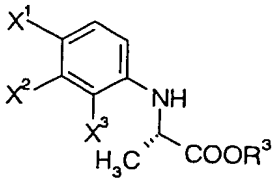
80. A compound represented by formula (III-1):



(III-1)

(wherein $X^1$, $X^2$ and $X^3$, each independently represents a halogen atom; and $R^3$ represents a hydrogen atom or an alkyl group).

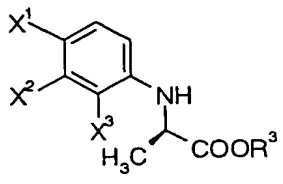
81. A compound represented by formula (III-1-a):



(III-1-a)

(wherein $X^1$, $X^2$ and $X^3$, each independently represents a halogen atom; and $R^3$ represents a hydrogen atom or an alkyl group).

82. A compound represented by formula (III-1-b):



(III-1-b)

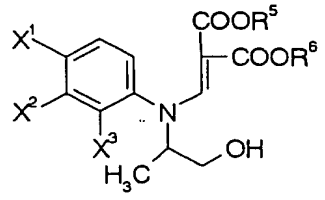
(wherein $X^1$, $X^2$ and $X^3$, each independently represents a halogen atom; and $R^3$ represents a hydrogen atom or an alkyl group).

83. The compound as claimed in any of claims 80 to 82 wherein $R^3$ is a hydrogen atom.

84. The compound as claimed in any of claims 80 to 82 wherein $R^3$ is a methyl group.

85. The compound as claimed in any of claims 80 to 82 wherein $R^3$ is an ethyl group.

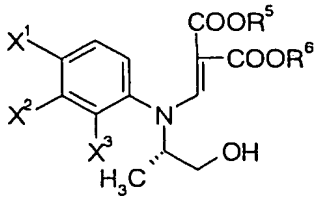
86. A compound represented by formula (V):



(V)

(wherein $X^1$, $X^2$ and $X^3$, each independently represents a halogen atom; and $R^5$ and $R^6$, each independently represents an alkyl group).

87. A compound represented by formula (V-a):



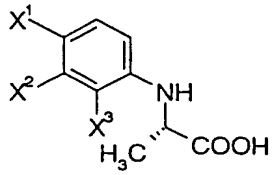
(V-a)

(wherein $X^1$, $X^2$ and $X^3$, each independently represents a halogen atom; and $R^5$ and $R^6$, each independently represents an alkyl group).

88. The compound as claimed in any of claims 80 to 87 wherein

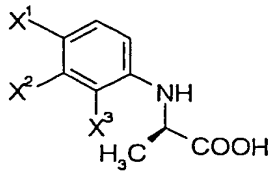
$X^1$, $X^2$ and $X^3$ are each a fluorine atom.

89. A salt of a carboxylic acid compound represented by the following formula:



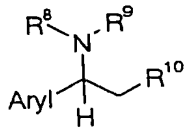
and an optically active organic base.

90. A salt of a compound represented by the following formula:



and an optically active organic base.

91. The salt as claimed in claim 89 or 90 wherein the optically active organic base is a compound represented by the following formula:



(wherein Aryl represents an aryl group optionally having a halogen atom, a nitro group, a cyano group, a carbamoyl group, an alkyl group having 1 to 6 carbon atoms or an alkoxy group having 1 to 6 carbon atoms; and

$R^8$, $R^9$ and $R^{10}$, each independently represents:

(1) a phenyl group optionally having a halogen atom, an alkyl group having 1 to 6 carbon atoms, a halogenoalkyl group having 1 to 6 carbon atoms, an alkoxy group having 1 to 6 carbon atoms, a nitro group, a carbamoyl group or a cyano group;

(2) a benzyl group optionally having a halogen atom, an alkyl group having 1 to 6 carbon atoms, a halogenoalkyl group having 1 to 6 carbon atoms, an alkoxy group having 1 to 6 carbon atoms, a nitro group, a carbamoyl group or a cyano group;

(3) an alkyl group having 1 to 6 carbon atoms; or

(4) a hydrogen atom).

92. The salt as claimed in claim 89 or 90 wherein the optically active organic base is 1-phenylethylamine.

93. The salt as claimed in claim 89 or 90 wherein 1-phenylethylamine is (R)-(+)-1-phenylethylamine.

94. The salt as claimed in claim 89 or 90 wherein the optically active organic base is 1-(p-tolyl)ethylamine.

95. The salt as claimed in claim 89 or 90 wherein the 1-(p-tolyl)ethylamine is (R)-(+)-1-(p-tolyl)ethylamine.

96. The salt as claimed in claim 89 or 90 wherein the optically active organic base is 1-phenyl-2-(p-tolyl)ethylamine.

97. The salt as claimed in claim 89 or 90 wherein the 1-phenyl-2-(p-tolyl)ethylamine is (S)-(+)- 1-phenyl-2-(p-tolyl)ethylamine.